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EEE BRANCH REVIEW

12/27/1976

DATE: 11/26
IN _____ OUT 12/27/76 IN _____ OUT _____

FISH & WILDLIFE

ENVIRONMENTAL CHEMISTRY

EFFICACY

FILE OR REG. NO. 707-EUP-82, 83

PETITION OR EXP. PERMIT NO. 5G1531

DATE DIV. RECEIVED 11/9/76

DATE OF SUBMISSION 11/3/76

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, D(H) F, N, R, S

PRODUCT MGR. NO. Stubbs

PRODUCT NAME (~~XXXXXXXXXXXX~~) Rohm + Hass

COMPANY NAME RH-2915-EC

SUBMISSION PURPOSE Extension of EUP - CORN + SOYBEANS

CHEMICAL & FORMULATION 2-chloro-1-(3-ethoxy-4-nitrophenoxv)
4-(trifluoromethyl) benzene 23.5%

①

100.0 Pesticidal Use

For use in corn and soybeans to control broadleaf and grass weeds either as a preemergent or post emergent herbicide. This is a request for an extension of the EUP granted previously (for use 6/76-6/77).

100.1 Application methods/directions/rates

Soybeans - 707-EUP-83

The total amount of RH-2915 2 EC required for this program is 2276 lbs. ai. Twentyone states will be participating in the program. Test plots within each state will average 25 acres. Ground application: Use standard low pressure ground equipment with flat fan nozzles. Apply to a well prepared soil surface after planting soybeans. Recommended dosages are 1-2 pts./A. (1/4 - 1/2 lbs. ai/a) for RH-2915 2EC alone or 1/8 - 1/2 lbs. ai/A in combination with Lasso 4E or Treflan 4E. When in combination with either lasso or treflan, RH-2915 2EC may be applied preplant, soil incorporated or pre-emergence to soil surface. There are also directions for post-emergent directed treatment of RH-2915 2EC alone (1/8 - 1/2 lbs. ai/A). Lastly the product can be applied preemergent to soybeans in no-till program: alone or with Paraquat at 1/4 - 1/2 lbs. ai./A.

Aerial application: To be applied immediately after planting soybeans - either alone or tank mixed with Lasso at 1/8 - 1/2 lbs. ai/A.

Corn - 707-EUP-82

The amount of RH-2915 2 EC required for this 600 acre witchweed control program is 1100 lbs. ai. Test areas of ten or more acres will be selected from fields in North + South Carolina. RH-2915 is applied by ground equipment as a spray directed at the base of corn plants (> 18") either before or just after the witchweed has emerged. If using a single treatment, apply up to 1 gal. of product (2 lbs. ai/A). If a dual treatment apply up to 1/2 gal. of product (1 lb. ai/A) and wait to determine the need for further treatment. Apply no more than 2 lbs. ai/A to corn during a growing season.

101.0 Chemical and physical properties

~~101.1~~
~~L.L.L.~~

Chemical name

3-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl) benzene.

101.2 Common name
RH-2915-2EC

102.0 Behavior in the environment

See previous review by S. Fredericks 11/21/75.

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No additional 70-15 day was submitted with this request.

103.0 Toxicological properties

103.1 Acute Toxicity

103.1.1 Mammal

See previous review by S. Fredericks
11/21/75

103.1.2 Bird
No acute oral submitted

103.1.3 Fish

Test: 96 hr. LC₅₀ fish bioassay

Species: bluegill sunfish

Results: 96 hr. LC₅₀ 0.2 (0.13-0.31) ppm w/95% C.L.

Chemical: 2-chloro-1-(3-ethox-4-nitrophenoxy)-4-trifluoromethyl benzene 94% ai.

Title: Acute toxicity of RH-2915 to bluegill (L. macrochirus) and rainbow trout (S. gairdneri)

Accession No: 095585 Report 154

Study Date: Aug. 1973

Researcher: Bionomics, Inc.

Submission: Rohm + Hass Co; 707-EUP=82,83; 11/3/76

Additional Test Data: No effect level = 0.056 ppm

Test Acceptability: acceptable

Test: 96 hr. LC₅₀ fish bioassay

Species: rainbow trout

Results: 96 hr. LC₅₀ 0.41 (0.31-0.56) ppm with 95% C.L.

Chemical: same as previous study

Title: same as previous study

Accession No: same as previous study

Study Date: same as previous study

Researcher: same as previous study

Submission: same as previous study

Additional Test Data: No effect level = 0.140 ppm

Test Acceptability: acceptable

103.1.4 Aquatic invertebrate
Not submitted

~~103.2.0 Subacute toxicity~~

103.2.0 Subacute toxicity

103.2.1 Bird

Test: 8 day dietary study for birds

Species: mallard ducks

Results: > 4000 ppm (for LC₅₀)

Chemical: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-trifluoromethyl benzene

Title: Report Eight day dietary LC₅₀ study of RH-915 on Bobwhite Quail and Mallard ducks

Accession No.: 095583 Report 254

Study Date: 10/15/73

Researcher: Cannon Labs. Inc. E-8703

Submission: Rohm & Haas Co.; 707-EUP-82, 83; 11/3/76

Additional Test Data: depression noted in individuals at all concs. (1000-4000) but no mortality.

Test Acceptability: Acceptable. (% ai. not reported)

Test: 8 day dietary study for birds

Species: bobwhite quail

Results: 390.00 ± 22.7 ppm (for LC₅₀)

Chemical: same as previous study

Title: same as previous study

Accession No.:

Study Date: same as previous study

Researcher: same as previous study

Submission: same as previous study

Additional Test Data: Depression and feather erection occurred at the lowest level tested (100 ppm); mortality occurred at all other levels.

Test Acceptability: acceptable (% ai. not reported)

103.2.2

Mammals

see S. Fredericks review of 11/21/75

103.3

Chronic toxicity

103.3.1

Mammals

See N. Cooks review (75)

104.0

Hazard assessment

104.1

Discussion/Previous review by N. Cook (75) and S. Fredericks 12/21/75 cited information regarding the persistence of RH-2915. The half life in soil was estimated to be 36-50 days; with 90% dissipation after 125-160 days. Lab studies show rapid photodegradation, but no hydrolysis. Drift to edges of fields- especially from aerial application probably maximizes the hazard potential.

On the basis of 1/2 lb/ ai/A the following residues are predicted in the various types of vegetation surrounding a field:

short grass = 140 ppm
long grass = 55 ppm
dense foliage = 29 ppm
& insects

104.1.1 Adequacy of toxicity data

Data are adequate to support extension of EUP.

104.1.2 Additional data required.

In order to support this use for registration, data must be submitted on acute oral for an avian species and a 48 hr. LC₅₀ aquatic invertebrate.

104.1.3 Exposure to non-target organisms

Birds and utilizing the edges of soybean fields are likely to be exposed to the drift from aerial applications. However, only those species utilizing existing short grass stands might pick up residues greater than 1/5 the LC₅₀ for bobwhite quail.

105.0 Conclusions

The environmental safety review staff approves the request for an extension of this experimental use permit. However, prior to registration the following data must be submitted.

- 1) 48 hr. LC₅₀ for one species of aquatic invertebrate
i.e. Daphnia.
- 2) Avian acute oral LD₅₀ for one species of wild waterfowl
or one species of upland game bird.

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Environmental Safety Section
EEE Branch
12/27/76

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